Claims

What is claimed is:

5 1. A compound of formula I:

or a pharmaceutically acceptable salt thereof wherein:

10 A is O,

NH, or

S;

B is

15 $C(=O)R_1$,

 $C(=S)R_1$

heterocylco,

heteroaryl,

C(=O)-heterocyclo, or

20 C(=O)-heteteroaryl;

D is N, E is C, F is CH, and "-----" is a bond, or D is CH, E is N, F is CH₂, and "-----" is absent;

attachment; and

5

is 5-membered heterocyclo or heteroaryl, wherein "owo" indicates points of attachment, and wherein the 5-membered heterocyclo or heteroaryl is optionally substituted with one or more group selected from aryl, heteroaryl, heterocyclo, OR₅, OC(=O)R₁, NR₆R₇, NR₅, N(C=O)R₅, NH(C=O)OR₅, NHSO₂R₅, NHSO₂NR₅, aryl, heteroaryl, heterocyclo, wherein aryl or heteroaryl is optionally substituted with one or more halo, OH, CF₃, CN, NO₂, (C₁-C₈)alkyl, (C₃-C₆)cycloalkyl, S(C₁-C₄)alkyl, C(=O)R₁, OR₅, OC(=O)R₁, NR₆R₇, NHR₅, N(C=O)R₅,

15

10

V and W independently are CH or N when "-----"is absent; or are C when "-----" is a bond;

X, Y, Z independently are O=C,

20

 CH_2 ,

NH(C=O)OR₅, NHSO₂R₅, NHSO₂NR₅;

CHR₃,

CHR₄,

CR₃R₄,

NR₅,

```
N(C=O)R_5,
                                        N(C=O)OR_5,
                                        NSO<sub>2</sub>R<sub>5</sub>,
                                        NSO<sub>2</sub>NR<sub>5</sub>,
 5
                                        O,
                                        S,
                                        SO, or
                                        SO<sub>2</sub>,
                             provided that at least one of X, Y, or Z is NR<sub>5</sub>,
10
                                        N(C=O)R_5,
                                        N(C=O)OR_5,
                                        NSO<sub>2</sub>R<sub>5</sub>,
                                        NSO<sub>2</sub>NR<sub>5</sub>,
                                        Ο,
15
                                        S,
                                        SO, or
                                        SO<sub>2</sub>;
                              J, K, Q independently are CR2 or N, with the proviso that when any
                   one of J, K, or Q is N, then the other two are CR2;
20
                              R<sub>1</sub> is H,
                                        (C_1-C_8)alkyl,
                                        (C<sub>3</sub>-C<sub>6</sub>)cycloalkyl,
25
                                        O—(C_1-C_4)alkyl,
                                        O—(C<sub>3</sub>-C<sub>6</sub>)cycloalkyl,
                                        S—(C_1-C_4) alkyl,
                                        S—(C<sub>3</sub>-C<sub>6</sub>)cycloalkyl,
                                        NH_2,
30
                                        NH(C<sub>1</sub>-C<sub>4</sub>)alkyl,
                                        N((C_1-C_4)alkyl)_2, or
                                      · NH—(C<sub>3</sub>-C<sub>6</sub>)cycloalkyl;
```

R₂ is H, halo, (C_1-C_8) alkyl, 5 (C₃-C₆)cycloalkyl, O— $(C_1$ - C_4)alkyl, O—(C₃-C₆)cycloalkyl, S— (C_1-C_4) alkyl, S—(C₃-C₆)cycloalkyl, 10 NH₂, NH(C₁-C₄)alkyl, $N((C_1-C_4)alkyl)_2$, or NH—(C₃-C₆)cycloalkyl; 15 R₃ and R₄ independently are halo, (C_1-C_8) alkyl, (C₃-C₆)cycloalkyl, O— $(C_1$ - C_4)alkyl, O-(C₃-C₆)cycloalkyl, 20 S— (C_1-C_4) alkyl, S—(C₃-C₆)cycloalkyl, NH_2 , NH(C₁-C₄)alkyl, $N((C_1-C_4)alkyl)_2$, NH—(C₃-C₆)cycloalkyl; 25 aryl, (CH₂)_n-aryl, heterocyclo, (CH₂)_n-heterocyclo, 30 heteroaryl, or (CH₂)_n-heteroaryl;

wherein n is 0, 1, 2, or 3;

R₅ is H,

 (C_1-C_8) alkyl,

(C₃-C₆)cycloalkyl,

5 aryl,

 $(CH_2)_n$ -aryl,

heterocyclo,

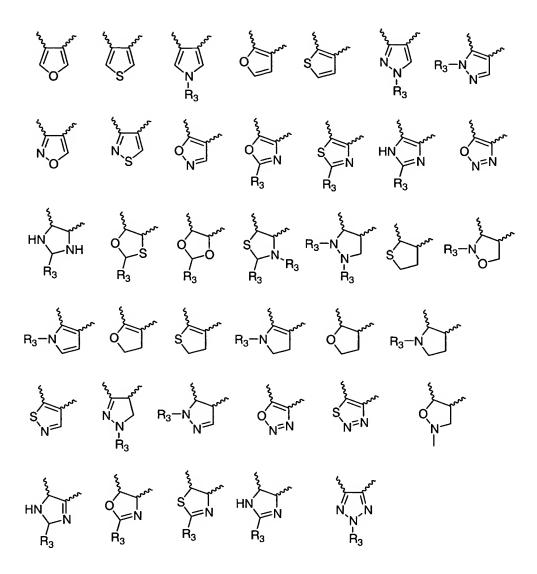
(CH₂)_n-heterocyclo,

heteroaryl, or

10 (CH₂)_n-heteroaryl;

wherein n is as defined above.

2. The compound of claim 1, wherein



3. The compound of claim 1 as designated in formula IA.

IA

4. The compound of claim 1 as designated in formula IB.

5

•

5. The compound of claim 1 as designated in formula IC.

5

6. The compound of claim 5, wherein P is

10

7. The compound of claim 6, wherein P is

wherein J_a is N or CR_{10} , wherein R_{10} is H or F.and wherein only one or two of X, Y, or Z is NR_5 , $N(C=O)R_5$, $N(C=O)OR_5$, NSO_2R_5 , NSO_2NR_5 , O, S, SO, or SO_2 .

8. A compound of formula II

10

or a pharmaceutically acceptable salt thereof wherein:

 $B \text{ is} \\ C(=O)R_1, \\ C(=S)R_1, \\ \text{heterocylco,} \\ \text{heteroaryl,} \\$

C(=O)-heterocyclo, or C(=O)-heteroaryl;

D is N, E is C, F is CH, and "----" is a bond, or D is CH, E is

N, F is CH₂, and "----" is absent;

is 5-membered heterocyclo or heteroaryl, wherein "" indicates points of attachment, and wherein the 5-membered heterocyclo or heteroaryl is optionally substituted with one or more group selected from aryl, heteroaryl, heterocyclo, OR₅, OC(=O)R₁, NR₆R₇, NR₅, N(C=O)R₅, NH(C=O)OR₅, NHSO₂R₅, NHSO₂NR₅, aryl, heteroaryl, heterocyclo, wherein aryl or heteroaryl is optionally substituted with one or more halo, OH, CF₃, CN, NO₂, (C₁-C₈)alkyl, (C₃-C₆)cycloalkyl, S(C₁-C₄)alkyl, C(=O)R₁, OR₅, OC(=O)R₁, NR₆R₇, NHR₅, N(C=O)R₅, NHC(=O)OR₅, NHSO₂R₅, NHSO₂NR₅;

V and W independently are CH or N when "-----"is absent; or are C when "-----" is a bond;

20 X, Y, Z independently are O=C, CH_2 , CH_3 , CHR_4 , CR_3R_4 , CR_3R_4 , NR_5 , $N(C=O)R_5$, $N(C=O)OR_5$, NSO_2R_5 , NSO_2NR_5 ,

30 O,

10

S, SO, or SO₂, provided that at least one of X, Y, or Z is NR₅, 5 $N(C=O)R_5$, N(C=O)OR₅, NSO_2R_5 , NSO₂NR₅, Ο, 10 S, SO, or SO₂; J, K, Q independently are CR2 or N, with the proviso that when any 15 one of J, K, or Q is N, then the other two are CR2; R₁ is H, (C_1-C_8) alkyl, (C₃-C₆)cycloalkyl, 20 O— $(C_1$ - C_4)alkyl, O—(C₃-C₆)cycloalkyl, S— (C_1-C_4) alkyl, S—(C₃-C₆)cycloalkyl, NH₂, 25 NH(C₁-C₄)alkyl, $N((C_1-C_4)alkyl)_2$, or NH—(C₃-C₆)cycloalkyl; R₂ is H, 30 halo, (C_1-C_8) alkyl, (C₃-C₆)cycloalkyl,

O— $(C_1$ - C_4)alkyl, O—(C₃-C₆)cycloalkyl, $S-(C_1-C_4)$ alkyl, S—(C₃-C₆)cycloalkyl, 5 NH₂, NH(C₁-C₄)alkyl, $N((C_1-C_4)alkyl)_2$, or NH—(C₃-C₆)cycloalkyl; 10 R₃ and R₄ independently are halo, (C_1-C_8) alkyl, (C₃-C₆)cycloalkyl, O— $(C_1$ - C_4)alkyl, O—(C₃-C₆)cycloalkyl, 15 S— (C_1-C_4) alkyl, S—(C₃-C₆)cycloalkyl, NH₂, $NH(C_1-C_4)$ alkyl, $N((C_1-C_4)alkyl)_2$, 20 NH—(C₃-C₆)cycloalkyl; aryl, $(CH_2)_n$ -aryl, heterocyclo, (CH₂)_n-heterocyclo, 25 heteroaryl, or (CH₂)_n-heteroaryl; wherein n is 0, 1, 2, or 3; R₅ is H, 30 (C_1-C_8) alkyl, (C₃-C₆)cycloalkyl, aryl,

 $(CH_2)_n$ -aryl, heterocyclo, $(CH_2)_n$ -heterocyclo, heteroaryl, or

5 $(CH_2)_n$ -heteroaryl;

wherein n is as defined above.

- 9. The compound of claim 9, wherein is as defined in claim 2.
- 10 10. The compound of claim 9as designated in formula IIA.

11. The compound of claim 9 as designated in formula IIB.

12. The compound of claim 9 as designated in formula IIC.

13. The compound of claim 9 as designated in formula IID

5

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wherein J_a is N or CR_{10} , wherein R_{10} is H or F.and wherein only one or two of X, Y, or Z is NR₅, N(C=O)R₅, N(C=O)OR₅, NSO₂R₅, NSO₂NR₅, O, S, SO, or SO₂.

14. The compound of claim 9 as designated in formula IIE, wherein only one or two of X, Y, or Z is NR_5 , $N(C=O)R_5$, $N(C=O)OR_5$, NSO_2R_5 , NSO_2NR_5 , O, S, SO, or SO_2 .

15. The compound of claim 9 as designated in formula IIF, wherein X_a is NR_5 , $N(C=O)R_5$, $N(C=O)OR_5$, NSO_2R_5 , NSO_2NR_5 , O, S, SO, or SO_2 .

5

16. The compound of claim 9 as designated in formula IIG, wherein Y_a is NR₅, N(C=O)R₅, N(C=O)OR₅, NSO₂R₅, NSO₂NR₅, O, S, SO, or SO₂...

10

17. The compound of claim 9 as designated in formula IIH, wherein Z_a is NR_5 , $N(C=O)R_5$, $N(C=O)OR_5$, NSO_2R_5 , NSO_2NR_5 , O, S, SO, or SO_2 .

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15

18. A compound of formula III

or a pharmaceutically acceptable salt thereof wherein:

5 A is O,

NH, or

S;

B is

10 $C(=O)R_1$,

 $C(=S)R_1$,

heterocylco,

heteroaryl,

C(=O)-heterocyclo, or

C(=O)-heteteroaryl;

D is N, E is C, F is CH, and "-----" is a bond, or D is CH, E is N, F is CH_2 , and "-----" is absent;

20

15

is 5-membered heterocyclo or heteroaryl, wherein "ow" indicates points of attachment, and wherein the 5-membered heterocyclo or heteroaryl is optionally substituted with one or more group selected from aryl, heteroaryl, heterocyclo, OR₅, OC(=O)R₁, NR₆R₇, NR₅, N(C=O)R₅, NH(C=O)OR₅, NHSO₂R₅, NHSO₂NR₅, aryl, heteroaryl, heterocyclo, wherein aryl or heteroaryl is optionally substituted with one

or more halo, OH, CF₃, CN, NO₂, (C₁-C₈)alkyl, (C₃-C₆)cycloalkyl, S(C₁-

```
C_4)alkyl, C(=O)R_1, OR_5, OC(=O)R_1, NR_6R_7, NHR_5, N(C=O)R_5, NH(C=O)OR_5, NHSO_2R_5, NHSO_2NR_5;
```

V and W independently are CH or N when "-----"is absent; or 5 are C when "-----" is a bond; X, Y, Z independently are O=C, CH₂, CHR₃, 10 CHR₄, CR_3R_4 , NR₅, $N(C=O)R_5$, $N(C=O)OR_5$, 15 NSO_2R_5 , NSO₂NR₅, Ο, S, SO, or 20 SO₂, provided that at least one of X, Y, or Z is NR₅, $N(C=O)R_5$ $N(C=O)OR_5$ NSO_2R_5 , 25 NSO₂NR₅, Ο, S, SO, or SO₂;

J, K, Q independently are CR_2 or N, with the proviso that when any one of J, K, or Q is N, then the other two are CR_2 ;

R₁ is H, (C_1-C_8) alkyl, (C₃-C₆)cycloalkyl, O— $(C_1$ - C_4)alkyl, 5 O-(C₃-C₆)cycloalkyl, S— (C_1-C_4) alkyl, S—(C₃-C₆)cycloalkyl, NH₂, 10 $NH(C_1-C_4)alkyl$, $N((C_1-C_4)alkyl)_2$, or NH—(C₃-C₆)cycloalkyl; R₂ is H, 15 halo, (C_1-C_8) alkyl, (C₃-C₆)cycloalkyl, O— $(C_1$ - C_4)alkyl, O— $(C_3$ - $C_6)$ cycloalkyl, S— (C_1-C_4) alkyl, 20 S—(C_3 - C_6)cycloalkyl, NH_2 , $NH(C_1-C_4)$ alkyl, $N((C_1-C_4)alkyl)_2$, or NH—(C₃-C₆)cycloalkyl; 25 R₃ and R₄ independently are halo, (C_1-C_8) alkyl, (C₃-C₆)cycloalkyl, 30 $O-(C_1-C_4)$ alkyl, O—(C₃-C₆)cycloalkyl, $S--(C_1-C_4)$ alkyl,

S—(C₃-C₆)cycloalkyl, NH_2 , $NH(C_1-C_4)alkyl,$ $N((C_1-C_4)alkyl)_2$, 5 NH—(C₃-C₆)cycloalkyl; aryl, (CH₂)_n-aryl, heterocyclo, (CH₂)_n-heterocyclo, 10 heteroaryl, or $(CH_2)_n$ -heteroaryl; wherein n is 0, 1, 2, or 3; R₅ is H, (C₁-C₈)alkyl, 15 (C₃-C₆)cycloalkyl, aryl, $(CH_2)_n$ -aryl, heterocyclo, 20 (CH₂)_n-heterocyclo, heteroaryl, or (CH₂)_n-heteroaryl; wherein n is as defined above. The compound of claim 18, wherein is as defined in claim 2. 25 19.

The compound of claim 18 as designated in formula IIIA.

20.

21. The compound of claim 19 as designated in formula IIIB.

5

22. The compound of claim 19 as designated in formula IIIC.

10

23. The compound of claim 19 as designated in formula IIID

IIID

wherein J_a is N or CR_{10} , wherein R_{10} is H or F.and wherein only one or two of X, Y, or Z is NR_5 , $N(C=O)R_5$, $N(C=O)OR_5$, NSO_2R_5 , NSO_2NR_5 , O, S, SO, or SO_2 .

5 24. The compound of claim 19 as designated in formula IIE, wherein only one or two of X, Y, or Z is NR₅, N(C=O)R₅, N(C=O)OR₅, NSO₂R₅, NSO₂NR₅, O, S, SO, or SO₂.

IIIE

10

25. The compound of claim 19 as designated in formula IIIF, wherein X_a is NR₅, N(C=O)R₅, N(C=O)OR₅, NSO₂R₅, NSO₂NR₅, O, S, SO, or SO₂...

IIIF

15

26. The compound of claim 19 as designated in formula IIIG, wherein Y_a is NR₅, N(C=O)R₅, N(C=O)OR₅, NSO₂R₅, NSO₂NR₅, O, S, SO, or SO₂.

27. The compound of claim 19 as designated in formula IIIH, wherein Z_a is NR₅, N(C=O)R₅, N(C=O)OR₅, NSO₂R₅, NSO₂NR₅, O, S, SO, or SO₂.

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28. A compound of formula IV:

10

5

or a pharmaceutically acceptable salt thereof wherein:

A is O,

NH, or

S;

15

B is

 $C(=O)R_1$,

 $C(=S)R_1$,

heterocylco,

20 heteroaryl,

C(=O)-heterocyclo, or

C(=O)-heteteroaryl;

D is N, E is C, F is CH, and "----" is a bond, or D is CH, E is N, F is CH₂, and "-----" is absent;

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is 5-membered heterocyclo or heteroaryl, wherein

5

10

"" indicates points of attachment, and wherein the 5-membered heterocyclo or heteroaryl is optionally substituted with one or more group selected from aryl, heteroaryl, heterocyclo, OR₅, OC(=O)R₁, NR₆R₇, NR₅, N(C=O)R₅, NH(C=O)OR₅, NHSO₂R₅, NHSO₂NR₅, aryl, heteroaryl, heterocyclo, wherein aryl or heteroaryl is optionally substituted with one or more halo, OH, CF₃, CN, NO₂, (C₁-C₈)alkyl, (C₃-C₆)cycloalkyl, S(C₁-C₄)alkyl, C(=O)R₁, OR₅, OC(=O)R₁, NR₆R₇, NHR₅, N(C=O)R₅, NHC(=O)OR₅, NHSO₂NR₅;

V and W independently are CH or N when "-----"is absent; or are C when "-----" is a bond;

X, Y, Z independently are O=C,

 CH_2

CHR₃,

20

CHR₄,

 CR_3R_4

NR₅,

 $N(C=O)R_5$

 $N(C=O)OR_5$,

25

 NSO_2R_5 ,

NSO₂NR₅,

Ο,

S,

SO, or

30

SO₂,

```
provided that at least one of X, Y, or Z is NR<sub>5</sub>,
                                      N(C=O)R_5,
                                      N(C=O)OR_5,
                                      NSO_2R_5,
 5
                                      NSO<sub>2</sub>NR<sub>5</sub>,
                                      O,
                                      S,
                                      SO, or
                                      SO<sub>2</sub>;
10
                            J, K, Q independently are CR2 or N, with the proviso that when any
                  one of J, K, or Q is N, then the other two are CR2;
                            R<sub>1</sub> is H,
15
                                      (C_1-C_8)alkyl,
                                      (C<sub>3</sub>-C<sub>6</sub>)cycloalkyl,
                                      O—(C_1-C_4)alkyl,
                                      O—(C<sub>3</sub>-C<sub>6</sub>)cycloalkyl,
                                      S—(C_1-C_4) alkyl,
                                      S—(C<sub>3</sub>-C<sub>6</sub>)cycloalkyl,
20
                                      NH_2
                                      NH(C_1-C_4)alkyl,
                                      N((C_1-C_4)alkyl)_2, or
                                      NH—(C<sub>3</sub>-C<sub>6</sub>)cycloalkyl;
25
                            R<sub>2</sub> is H,
                                      halo,
                                      (C_1-C_8)alkyl,
                                      (C<sub>3</sub>-C<sub>6</sub>)cycloalkyl,
30
                                      O—(C_1-C_4)alkyl,
                                      O-(C<sub>3</sub>-C<sub>6</sub>)cycloalkyl,
```

 $S--(C_1-C_4)$ alkyl,

```
S—(C<sub>3</sub>-C<sub>6</sub>)cycloalkyl,
                                             NH_2
                                             NH(C_1-C_4)alkyl,
                                             N((C_1-C_4)alkyl)_2, or
                                             NH—(C<sub>3</sub>-C<sub>6</sub>)cycloalkyl;
 5
                                 R<sub>3</sub> and R<sub>4</sub> independently are halo,
                                             (C_1-C_8)alkyl,
                                             (C<sub>3</sub>-C<sub>6</sub>)cycloalkyl,
10
                                             O—(C_1-C_4)alkyl,
                                             O—(C<sub>3</sub>-C<sub>6</sub>)cycloalkyl,
                                             S—(C_1-C_4) alkyl,
                                             S—(C<sub>3</sub>-C<sub>6</sub>)cycloalkyl,
                                             NH<sub>2</sub>,
15
                                             NH(C<sub>1</sub>-C<sub>4</sub>)alkyl,
                                             N((C_1-C_4)alkyl)_2,
                                             NH—(C<sub>3</sub>-C<sub>6</sub>)cycloalkyl;
                                             aryl,
                                             (CH<sub>2</sub>)<sub>n</sub>-aryl,
20
                                             heterocyclo,
                                              (CH<sub>2</sub>)<sub>n</sub>-heterocyclo,
                                              heteroaryl, or
                                              (CH<sub>2</sub>)<sub>n</sub>-heteroaryl;
                                  wherein n is 0, 1, 2, or 3;
25
                                  R<sub>5</sub> is H,
                                              (C_1-C_8)alkyl,
                                              (C<sub>3</sub>-C<sub>6</sub>)cycloalkyl,
                                              aryl,
30
                                              (CH<sub>2</sub>)<sub>n</sub>-aryl,
                                              heterocyclo,
                                              (CH<sub>2</sub>)<sub>n</sub>-heterocyclo,
```

heteroaryl, or

(CH₂)_n-heteroaryl;

wherein n is as defined above.

- 5 29. The compound of claim 28, wherein
- is as defined in claim 2.
- 30. The compound of claim 28 as designated in formula IVA.

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10

31. The compound of claim 28 as designated in formula IVB.

IVB

15 32. The compound of claim 28 as designated in formula IVC.

IVC

33. The compound of claim 28 as designated in formula IVD

- wherein J_a is N or CR_{10} , wherein R_{10} is H or F.and wherein only one or two of X, Y, or Z is NR_5 , $N(C=O)R_5$, $N(C=O)OR_5$, NSO_2R_5 , NSO_2NR_5 , O, S, SO, or SO_2 .
- 34. The compound of claim 28 as designated in formula IVE, wherein only one or two of X, Y, or Z is NR₅, N(C=O)R₅, N(C=O)OR₅, NSO₂R₅, NSO₂NR₅, O, S, SO, or SO₂.

IVE

15

wherein R_8 and R_9 are each independently H; halo, (C_1-C_8) alkyl, (C_3-C_6) cycloalkyl, O— (C_1-C_4) alkyl, S— (C_1-C_4) alkyl, aryl, $(CH_2)_n$ -aryl, heterocyclo, $(CH_2)_n$ -heterocyclo, heteroaryl, or $(CH_2)_n$ -heteroaryl, wherein n is 0, 1, 2, or 3; or taken together R_8 and R_9 are bonded to the same C and form C=O.

20

35. The compound of claim 28 as designated in formula IVF, wherein X_a is NR₅, N(C=O)R₅, N(C=O)OR₅, NSO₂R₅, NSO₂NR₅, O, S, SO, or SO₂...

- 36. The compound of claim 28 as designated in formula IVG, wherein Y_a is
- $5 \qquad NR_5, \, N(C = O)R_5, \, N(C = O)OR_5, \, NSO_2R_5, \, NSO_2NR_5, \, O, \, S, \, SO, \, or \, SO_2.$

IVG

37. The compound of claim 28 as designated in formula IVH, wherein Z_a is NR₅, N(C=O)R₅, N(C=O)OR₅, NSO₂R₅, NSO₂NR₅, O, S, SO, or SO₂.

IVH

38. A compound of formula V:

or a pharmaceutically acceptable salt thereof wherein:

A is O,

NH, or

S;

5

10

15

20

25

B is

 $C(=O)R_1$,

 $C(=S)R_1$,

heterocylco,

heteroaryl,

C(=O)-heterocyclo, or

C(=O)-heteteroaryl;

D is N, E is C, F is CH, and "----" is a bond, or D is CH, E is N, F is CH₂, and "-----" is absent;

is 5-membered heterocyclo or heteroaryl, wherein ""ow" indicates points of attachment, and wherein the 5-membered heterocyclo or heteroaryl is optionally substituted with one or more group selected from aryl, heteroaryl, heterocyclo, OR₅, OC(=O)R₁, NR₆R₇, NR₅, N(C=O)R₅, NH(C=O)OR₅, NHSO₂R₅, NHSO₂NR₅, aryl, heteroaryl, heterocyclo, wherein aryl or heteroaryl is optionally substituted with one or more halo, OH, CF₃, CN, NO₂, (C₁-C₈)alkyl, (C₃-C₆)cycloalkyl, S(C₁-C₄)alkyl, C(=O)R₁, OR₅, OC(=O)R₁, NR₆R₇, NHR₅, N(C=O)R₅, NHSO₂R₅, NHSO₂NR₅;

V and W independently are CH or N when "-----"is absent; or are C when "-----" is a bond;

```
X, Y, Z independently are O=C,
                                        CH<sub>2</sub>,
                                        CHR<sub>3</sub>,
                                        CHR<sub>4</sub>,
 5
                                        CR<sub>3</sub>R<sub>4</sub>,
                                        NR<sub>5</sub>,
                                        N(C=O)R_5,
                                        N(C=O)OR_5,
                                        NSO<sub>2</sub>R<sub>5</sub>,
10
                                        NSO<sub>2</sub>NR<sub>5</sub>,
                                        O,
                                        S,
                                        SO, or
                                        SO<sub>2</sub>,
                             provided that at least one of X, Y, or Z is NR<sub>5</sub>,
15
                                        N(C=O)R_5
                                        N(C=O)OR_5
                                        NSO<sub>2</sub>R<sub>5</sub>,
                                        NSO<sub>2</sub>NR<sub>5</sub>,
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                                        0,
                                        S,
                                        SO, or
                                        SO<sub>2</sub>;
                             J, K, Q independently are CR2 or N, with the proviso that when any
25
                   one of J, K, or Q is N, then the other two are CR2;
                              R<sub>1</sub> is H,
                                        (C_1-C_8)alkyl,
                                        (C<sub>3</sub>-C<sub>6</sub>)cycloalkyl,
30
                                        O—(C_1-C_4)alkyl,
                                        O—(C_3-C_6)cycloalkyl,
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S— (C_1-C_4) alkyl,

S—(C₃-C₆)cycloalkyl, NH₂, $NH(C_1-C_4)$ alkyl, 5 $N((C_1-C_4)alkyl)_2$, or NH—(C₃-C₆)cycloalkyl; R₂ is H, halo, 10 (C_1-C_8) alkyl, (C₃-C₆)cycloalkyl, O— $(C_1$ - $C_4)$ alkyl, O-(C₃-C₆)cycloalkyl, S— (C_1-C_4) alkyl, S—(C₃-C₆)cycloalkyl, 15 NH_2 , NH(C₁-C₄)alkyl, $N((C_1-C_4)alkyl)_2$, or NH—(C₃-C₆)cycloalkyl; 20 R₃ and R₄ independently are halo, (C_1-C_8) alkyl, (C₃-C₆)cycloalkyl, O— $(C_1$ - $C_4)$ alkyl, 25 O—(C₃-C₆)cycloalkyl, S— (C_1-C_4) alkyl, S—(C₃-C₆)cycloalkyl, NH₂, $NH(C_1-C_4)$ alkyl, 30 $N((C_1-C_4)alkyl)_2$, NH—(C₃-C₆)cycloalkyl; aryl,

 $(CH_2)_n\text{-aryl},$ heterocyclo, $(CH_2)_n\text{-heterocyclo},$ heteroaryl, or $(CH_2)_n\text{-heteroaryl};$ wherein n is 0, 1, 2, or 3;

R₅ is H,

 (C_1-C_8) alkyl,

(C₃-C₆)cycloalkyl,

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aryl,

 $(CH_2)_n$ -aryl,

heterocyclo,

(CH₂)_n-heterocyclo,

15 heteroaryl, or

 $(CH_2)_n$ -heteroaryl;

wherein n is as defined above.

39. The compound of claim 38, wherein is as defined in claim 2.

40. The compound of claim 38 as designated in formula VA.

25 41. The compound of claim 38 as designated in formula VB.

42. The compound of claim 38 as designated in formula VC.

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43. The compound of claim 38 as designated in formula VD

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wherein J_a is N or CR_{10} , wherein R_{10} is H or F.and wherein only one or two of X, Y, or Z is NR₅, N(C=O)R₅, N(C=O)OR₅, NSO₂R₅, NSO₂NR₅, O, S, SO, or SO₂.

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44. The compound of claim 38 as designated in formula IIE, wherein only one or two of X, Y, or Z is NR_5 , $N(C=O)R_5$, $N(C=O)OR_5$, NSO_2R_5 , NSO_2NR_5 , O, S, SO, or SO_2 .

45. The compound of claim 38 as designated in formula VF, wherein X_a is NR₅, N(C=O)R₅, N(C=O)OR₅, NSO₂R₅, NSO₂NR₅, O, S, SO, or SO₂...

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- X_a J_a O NH O NH O Me
- 46. The compound of claim 38 as designated in formula VG, wherein Y_a is NR₅, N(C=O)R₅, N(C=O)OR₅, NSO₂R₅, NSO₂NR₅, O, S, SO, or SO₂.

47. The compound of claim 38 as designated in formula VH, wherein Z_a is NR₅, N(C=O)R₅, N(C=O)OR₅, NSO₂R₅, NSO₂NR₅, O, S, SO, or SO₂.

VH

49. A compound which is:

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- (S)-N-[3-(4,5-Dihydro-2H-6-oxa-1,2-diaza-benzo[e]azulen-8-yl)-2-oxo-oxazolidin-5-ylmethyl]-acetamide;
- (S)-N-[3-(2-Methyl-4,5-dihydro-2H-6-oxa-1,2-diaza-benzo[e]azulen-8-yl)-2-oxo-oxazolidin-5-ylmethyl]-acetamide;
- (S)-N-[3-(1-Methyl-4,5-dihydro-1H-6-oxa-1,2-diaza-benzo[e]azulen-8-yl)-2-oxo-oxazolidin-5-ylmethyl]-acetamide;
- 10 (S)-N-[3-(2-Ethyl-4,5-dihydro-2H-6-oxa-1,2-diaza-benzo[e]azulen-8-yl)-2-oxo-oxazolidin-5-ylmethyl]-acetamide;
 - (S)-N-[3-(1-Ethyl-4,5-dihydro-1H-6-oxa-1,2-diaza-benzo[e]azulen-8-yl)-2-oxo-oxazolidin-5-ylmethyl]-acetamide;
- (S)-N-[3-(2-Benzyl-4,5-dihydro-2H-6-oxa-1,2-diaza-benzo[e]azulen-8-yl)-2-oxo-oxazolidin-5-ylmethyl]-acetamide;
 - (S)-N-[3-(1-Benzyl-4,5-dihydro-1H-6-oxa-1,2-diaza-benzo[e] azulen-8-yl)-2-oxo-oxazolidin-5-ylmethyl]-acetamide;
 - (S)-N-[2-Oxo-3-(2-phenethyl-4,5-dihydro-2H-6-oxa-1,2-diaza-benzo[e]azulen-8-yl)-oxazolidin-5-ylmethyl]-acetamide;
 - (S)-N-[2-Oxo-3-(1-phenethyl-4,5-dihydro-1H-6-oxa-1,2-diaza-benzo[e]azulen-8-yl)-oxazolidin-5-ylmethyl]-acetamide;
 - (S)-N-[2-Oxo-3-(3-phenyl-4,5-dihydro-2H-6-oxa-1,2-diaza-benzo[e]azulen-8-yl)-oxazolidin-5-ylmethyl]-acetamide;
 - (S)-N-[3-(2,6-Dihydro-4H-5-oxa-1,2-diaza-benzo[e]azulen-8-yl)-2-oxo-oxazolidin-5-ylmethyl]-acetamide;
 - (S)-N-[3-(5,6-Dihydro-2H-4-oxa-1,2-diaza-benzo[e]azulen-8-yl)-2-oxo-oxazolidin-5-ylmethyl]-acetamide;
 - (S)-N-[2-Oxo-3-(2,4,5,6-tetrahydro-1,2,6-triaza-benzo[e]azulen-8-yl)-oxazolidin-5-ylmethyl]-acetamide;
- 30 (S)-N-[2-Oxo-3-(2,4,5,6-tetrahydro-1,2,5-triaza-benzo[e]azulen-8-yl)-oxazolidin-5-ylmethyl]-acetamide;

- (S)-N-[2-Oxo-3-(2,4,5,6-tetrahydro-1,2,4-triaza-benzo[e]azulen-8-yl)-oxazolidin-5-ylmethyl]-acetamide;
- (S)-N-[3-(4,5-Dihydro-2H-6-thia-1,2-diaza-benzo[e]azulen-8-yl)-2-oxo-oxazolidin-5-ylmethyl]-acetamide;
- 5 (S)-N-[3-(2,6-Dihydro-4H-5-thia-1,2-diaza-benzo[e]azulen-8-yl)-2-oxo-oxazolidin-5-ylmethyl]-acetamide;
 - (S)-N-[3-(5,6-Dihydro-2H-4-thia-1,2-diaza-benzo[e]azulen-8-yl)-2-oxo-oxazolidin-5-ylmethyl]-acetamide;
- (S)-N-[3-(6,6-Dioxo-2,4,5,6-tetrahydro-6l6-thia-1,2-diaza-benzo[e]azulen-8-yl)-2-oxo-oxazolidin-5-ylmethyl]-acetamide;
 - (S)-N-[3-(5,5-Dioxo-2,4,5,6-tetrahydro-5l6-thia-1,2-diaza-benzo[e]azulen-8-yl)-2-oxo-oxazolidin-5-ylmethyl]-acetamide;
 - (S)-N-[3-(4,4-Dioxo-2,4,5,6-tetrahydro-4l6-thia-1,2-diaza-benzo[e]azulen-8-yl)-2-oxo-oxazolidin-5-ylmethyl]-acetamide;
- 15 (S)-N-[3-(4,5-Dihydro-1,6-dioxa-2-aza-benzo[e]azulen-8-yl)-2-oxo-oxazolidin-5-ylmethyl]-acetamide;
 - (S)-N-[3-(4H,6H-1,5-Dioxa-2-aza-benzo[e]azulen-8-yl)-2-oxo-oxazolidin-5-ylmethyl]-acetamide;
 - (S)-N-[3-(5,6-Dihydro-1,4-dioxa-2-aza-benzo[e]azulen-8-yl)-2-oxo-oxazolidin-5-ylmethyl]-acetamide;

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- (S)-N-[3-(5,6-Dihydro-4H-1-oxa-2,6-diaza-benzo[e]azulen-8-yl)-2-oxo-oxazolidin-5-ylmethyl]-acetamide;
- (S)-N-[3-(5,6-Dihydro-4H-1-oxa-2,5-diaza-benzo[e]azulen-8-yl)-2-oxo-oxazolidin-5-ylmethyl]-acetamide;
- 25 (S)-N-[3-(5,6-Dihydro-4H-1-oxa-2,4-diaza-benzo[e]azulen-8-yl)-2-oxo-oxazolidin-5-ylmethyl]-acetamide;
 - (S)-N-[3-(4,5-Dihydro-1-oxa-6-thia-2-aza-benzo[e]azulen-8-yl)-2-oxo-oxazolidin-5-ylmethyl]-acetamide;
 - (S)-N-[3-(4H,6H-1-Oxa-5-thia-2-aza-benzo[e]azulen-8-yl)-2-oxo-oxazolidin-5-ylmethyl]-acetamide;
 - (S)-N-[3-(5,6-Dihydro-1-oxa-4-thia-2-aza-benzo[e]azulen-8-yl)-2-oxo-oxazolidin-5-ylmethyl]-acetamide;

- (S)-N-[3-(4,5-Dihydro-1-oxa-6-thia-2-aza-benzo[e]azulen-8-yl)-2-oxo-oxazolidin-5-ylmethyl]-acetamide;
- (S)-N-[3-(5,5-Dioxo-5,6-dihydro-4H-1-oxa-5l6-thia-2-aza-benzo[e]azulen-8-yl)-2-oxo-oxazolidin-5-ylmethyl]-acetamide; or
- (S)-N-[3-(5,6-Dihydro-1-oxa-4-thia-2-aza-benzo[e]azulen-8-yl)-2-oxo-oxazolidin-5-ylmethyl]-acetamide.
 - 50. A pharmaceutical formulation comprising a compound of claim 1 admixed with a pharmaceutically acceptable diluent, carrier, or excipient.

51. A method of treating a bacterial infection in a mammal, comprising administering to a mammal in need thereof an effective amount of a compound of claim 1.

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